

VI.3.3B-DELETE-STATION PROGRAM PPINIT COMMAND DELETE STATION

Purpose

Command DELETE STATION is used to:

- o delete an entire station definition or
- o check if a station is used in another station definition, in an MAP, MAT or MAPE area definition or in the definition of a Segment that is part of a Carryover Group

The following commands would be used to check if a station is used but not have the station deleted:

```
@SETOPT RUNCHECK(YES)
@DELETE STATION ALL ...
```

Format

```
@DELETE STATION
```

```
[CHECKREF (YES °)] [RUNNTWK (YES °)]
```

```
ALL {staid}
```

Parameter Description

<u>Parameter</u>	<u>Required/ Optional</u>	<u>Maximum Characters</u>	<u>Description</u>
CHECKREF	O	3	Option to check if station is referenced <u>1/ 3/</u>
RUNNTWK	O	3	Option to run the NETWORK command if any stations were successfully deleted and any NETWORK indicators were set <u>2/ 3/</u>
staid	R	8	Station identifier

Notes:

- 1/ If CHECKREF(NO) is not specified or CHECKREF(YES) is specified, the station will not be deleted if it is used as:
- o a significance PCPN station by another station
 - o a predetermined PCPN station by an MAP area
 - o a predetermined TEMP station by an MAT area
 - o a predetermined PE station by an MAPE area

- o an RRS data type in the definition of a Segment that is part of a Carryover Group

To not have the checks made to determine if a station is referenced, enter CHECKREF(NO).

- 2/ If RUNNTWK(NO) is not specified or RUNNTWK(YES) is specified, the NETWORK command will be run if any stations were successfully deleted and any NETWORK indicators were set.

To not have the NETWORK command run if any stations are successfully deleted, enter RUNNTWK(NO).

- 3/ If the proper steps are not followed, the OFS files can end up in a condition where a FCST program run cannot be made (see 'Steps To Follow When Deleting Stations').

Steps To Follow When Deleting Stations

If the proper precautions are not taken, the OFS files can end up in a condition where a FCST program run cannot be made.

The following steps should be followed when deleting stations:

I. Before Deleting Stations:

1. Determine if any stations to be deleted are assigned significance weights in a PCPN station, predetermined weights in an MAP, MAT or MAPE area or have RRS time series used in a Segment definition.

- o A station to be deleted must be defined again before the FCST program can be run can successfully if it:
 - is uses as a significance station in a PCPN station
 - is used as a predetermined station in an MAP, MAT or MAPE area
 - has RRS time series that are used in a Segment

- o When the station is defined again it must include:
 - the daily data types that are used as significance weights
 - the daily data types that are used as predetermined weights
 - the RRS types used in the Segment

If not, the station, area or Segment must be redefined to remove the reference to the data type.

If none of the stations are assigned significance weights, predetermined weights or used in Segment definitions, the stations do not have to be defined again before making a FCST program run. Only the NETWORK command must be run.

2. Make sure that there is sufficient space in the OFS files to delete the stations and define most of them again and possibly add some new stations. When stations are deleted

most of the space used in the data bases is marked deleted and is not reused when the station is defined again. Using an current STATUS report, the percent used values need to be checked for the following files:

- o Preprocessor Data Base:
 - Station Information File Record Status
 - Data File Status
 - File PDBRRS (RRS Primary Data)

- o Preprocessor Parametric Data Base:
 - Data File Status
 - File PPPARM1
 - File PPPARM2

- o Processed Data Base:
 - Data File Status
 - File PRDTS2

If the percent used value for any of these files exceeds 95 percent contact your Focal Point to check if sufficient space exists or if REORDER should be run or the OFS files expanded. If a large number of stations are being deleted and/or added, the percent used value may need to be below 95 percent in order to successfully define all the stations.

If new stations with daily data types (PCPN, TEMP or PE) are to be added, the Preprocessor Data Base Daily Data Type Status and the Preprocessor Parametric Data Base Special Parameter Type Status need to be checked to make sure there are sufficient unused entries to hold the new stations. Deleted entries are reused for daily data types.

If new stations with SA, SM, GHB5, GPLT and/or CDAS source codes are to be added, make sure there is sufficient space in the SASM and GOES control files to hold these additional entries.

3. Make sure there is sufficient time left in the day to complete all the program runs in the station deletion process. All runs must be completed before the FCST program can be executed. Typically there are 3 runs that need to be made:

- 1 - DELETE stations
- 2 - DEFINE stations
- 3 - NETWORK

If none of the stations are assigned significance weights, assigned predetermined weights or used in Segments or, only runs 1 and 3 need to be made before running program FCST.

If problems occur during the station deletion process, one or more of the OFS data bases may have to be restored.

4. Avoid deleting stations on Friday and the day before a holiday.

Station deletion and subsequent DEFINE and NETWORK runs should be made until operational forecasting is completed.

5. A backup copy of the OFS data files should be made before beginning the station deletion process. It is the responsibility of the user to be familiar with the backup and restore process for OFS files.
6. Stations with a station definition status of incomplete do not have to be deleted. The definition of these stations can be completed by rerunning the DEFINE command after the cause of the error has been corrected.

II. Deleting Stations:

1. See Chapter I.2 for program execution information.
2. The PPINIT input needed to delete stations is as follows:

```
@DELETE STATION ALL {staid}  
@STATUS  
@STOP
```

where {staid} are the identifiers for stations to be deleted

Include the STATUS command when before the STOP command. It provides valuable information especially if something goes wrong.

3. If you have any questions regarding the delete station output, contact your Focal Point. A warning will occur when an incomplete station is deleted or an attempt is made to delete a station that does not exist, otherwise no errors or warnings should occur during a delete station run.

III. After Deleting Stations:

1. After the stations have been deleted, the only stations that must be immediately defined again are those with significance weights in a PCPN station, predetermined weights in an MAP, MAT or MAPE area or had RRS time series used in a Segment and these references are not removed from the station, area or Segment definition.

The final step is to run the NETWORK command. The NETWORK command must be run prior to a FCST program run so that references and internal pointers to the deleted and any newly defined stations are removed or updated.

Include the STATUS command just before the STOP command.

2. Periodically a PPINIT program DEFINE station run and another program execute at the same time. If the PPINIT run was writing to the Preprocessor Data Base at the same time as the program was writing to this data base, file content problems could result. The output from the PPINIT run appeared okay, but if the other run completed last, old directory records and possibly data records were written back to the Preprocessor Data Base overwriting the PPINIT define station entries. The problem does not show up until a subsequent run.

Software changes have been made to prevent two programs from writing to the Preprocessor Data Base at the same time. To ensure this problem does not occur, all DEFINE STATION runs should be made using the program execution information in Chapter I.2.

The user should check the output to determine if a PPINIT define station and another program running at the same time caused a file content problem. The best way to determine if a problem occurred is to monitor the Station Information File (SIF) Record Status Section of the Preprocessor Data Base Status portion of the STATUS report. The last used SIF record should:

- remain unchanged during a DELETE run
- increase during a DEFINE STATION run (it increases by one or two records per station depending on the number of data types assigned to the station)
- remain unchanged during a NETWORK run

If the increase is less than expected during a DEFINE STATION run or if the last used SIF record number decreases after a NETWORK run, a problem occurred during the previous DEFINE STATION run. Contact your Focal Point. Some or all of the OFS files may need to be restored.

3. If errors occur in the subsequent FCST program run of the FCEXEC function indicating that a time series does not exist, it is because a station with an RRS data type whose time series was used in a Segment was deleted and not defined again with that data type. If unusual results are produced by the MAP, MAT or MAPE functions (possibly negative time series values), it is because a station with PCPN, TEMP or PE data and assigned predetermined weights in an area definition was deleted and not defined again with that parameter type. These stations must be deleted, defined correctly and NETWORK run again or removed from the Segment or area definition before FCST can be successfully executed.
4. If you have any questions or if you are not sure that the results are correct, contact your Focal Point.

Summary of Delete Station Steps

I. Before Deleting Stations

1. Determine if stations being deleted are used in any station, area or Segment definitions. If so, these stations must be redefined or removed from the area or Segment. Incomplete stations do not have to be deleted.
2. Make sure there is sufficient space in the OFS files to redefine the deleted stations and add any new stations.
3. Make sure there is sufficient time available to complete all steps before the next FCST program run needs to be executed.
4. Create a backup copy of the OFS data files before starting the delete process.

II. Deleting Stations

1. Do not delete stations until operational forecasting is completed.
2. Run DELETE command to delete the stations. Include the STATUS command just before the STOP command.

III. After Deleting Stations

1. Run DEFINE STATION command to define stations that needed to be changed. Include the STATUS command just before the STOP command.
2. Run NETWORK command as the last step. Include the STATUS command just before the STOP command.
3. Check the output carefully.
4. Errors on the next FCST program run indicate that all the station, area or Segment information was not handled correctly.